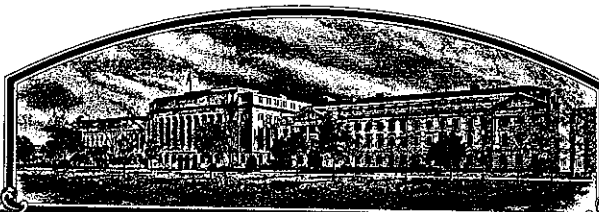


No.

8900064



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

**United AgriSeeds, Inc.**

Whereas, THERE HAS BEEN PRESENTED TO THE

**Secretary of Agriculture**

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS BY THE OWNER OF THE RIGHTS. (34 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

ALFALFA

'Allegiance'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D. C. this *31st* day of *March* in the year of our Lord one thousand nine hundred and eighty-nine.

Attest:

*Kenneth H. Evans*  
Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

*Clayton Yentler*  
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

FORM APPROVED: OMB NO. 0581-0055

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

## APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

1. NAME OF APPLICANT(S) United Agriseeds, Inc.		2. TEMPORARY DESIGNATION 84-27		3. VARIETY NAME Allegiance	
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) P. O. Box 4011 Champaign, IL 61820		5. PHONE (Include area code) (217) 373-5300		FOR OFFICIAL USE ONLY PVPO NUMBER 8900064	
6. GENUS AND SPECIES NAME Medicago sativa L.		7. FAMILY NAME (Botanical) Leguminosae		FILING DATE Jan. 3, 1989 TIME 9:30 <input checked="" type="checkbox"/> A.M. <input type="checkbox"/> P.M.	
8. KIND NAME Alfalfa		9. DATE OF DETERMINATION Oct. 26, 1984		AMOUNT FOR FILING \$ 1800.00 DATE Jan. 3, 1989	
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation				AMOUNT FOR CERTIFICATE \$ 200.00 DATE Feb. 23, 1989	
11. IF INCORPORATED, GIVE STATE OF INCORPORATION Massachusetts				12. DATE OF INCORPORATION Nov. 1981	
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS M. A. Peterson, Director of Research, W-L Research, Inc. 8701 Hwy. 14, Evansville, WI 53536-9593					
PHONE (Include area code): (608) 882-4100					
14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED					
a. <input checked="" type="checkbox"/> Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)					
b. <input checked="" type="checkbox"/> Exhibit B, Novelty Statement.					
c. <input checked="" type="checkbox"/> Exhibit C, Objective Description of Variety (Request form from Plant Variety Protection Office.)					
d. <input checked="" type="checkbox"/> Exhibit D, Additional Description of Variety.					
e. <input checked="" type="checkbox"/> Exhibit E, Statement of the Basis of Applicant's Ownership.					
15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act.) <input checked="" type="checkbox"/> Yes (If "Yes," answer items 16 and 17 below) <input type="checkbox"/> No					
16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>NOTE 2/23/89</i>			17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input checked="" type="checkbox"/> Foundation <input type="checkbox"/> Registered <input checked="" type="checkbox"/> Certified		
18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.? <input type="checkbox"/> Yes (If "Yes," give date) <input checked="" type="checkbox"/> No					
19. HAS THE VARIETY BEEN RELEASED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRIES? Allegiance was sold in limited quantities in the United States in Fall 1988. There have been no sales in other countries. <input type="checkbox"/> Yes (If "Yes," give names of countries and dates) <input checked="" type="checkbox"/> No					
20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable. The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.					
SIGNATURE OF APPLICANT <i>[Signature]</i>				DATE 12-21-88	
SIGNATURE OF APPLICANT				DATE	

Exhibit AOrigin and Breeding History of Allegiance

Allegiance is a synthetic variety developed through two cycles of recurrent phenotypic selection for improved pest resistance. The base population was composed of 191 plants from three experimental synthetics and DK 120 selected for disease-free foliage and root systems and for high forage yield in three-year old test plots. Approximately 95 selections from the three experimental lines were reciprocally hand-crossed to 96 DK 120 plant selections in the greenhouse. Seed was harvested and bulked. The bulked seed generation was screened for resistance to Phytophthora root rot and bacterial wilt in sequential inoculations with 100 plants selected and intercrossed in the greenhouse to produce the next generation (Cycle 1). The Cycle-1 generation was then screened for resistance to anthracnose (Race 1). Two hundred anthracnose resistant selections were grown under cage isolation at Warden, WA in 1984 with seed harvested as breeder seed (Syn. 1).

The original source material in Allegiance traces predominately to Vertus, Grimm, and WB-6, with lesser contributions from Vernal, Saranac, and Weevlchek.

Type and Frequency of Variants

No variants are recognized in Allegiance beyond the limits given in Exhibit C.

Evidence of Uniformity and Stability

Allegiance is stable in all essential and distinguishing characteristics during normal seed production. Allegiance is as uniform as other alfalfa varieties previously accepted by state seed certification programs.

Exhibit BNovelty Statement for Allegiance

Allegiance is a dormant variety that possesses superior disease, insect, and nematode resistance when compared to most varieties with similar fall growth characteristics. Allegiance is most similar to DK 125 in growth type, appearance, and pest resistance. However, Allegiance is resistant to bacterial wilt (DK 125 = HR, Table 1), has low resistance to spotted alfalfa aphid (DK 125 = S, Table 3), and Allegiance is a Ranger-type for fall dormancy (DK 125 = Saranac-type, Table 2). Allegiance is also similar to Echo. However, Allegiance is highly resistant to anthracnose (Echo = MR, Table 4), and Allegiance is a Ranger-type fall dormancy (Echo = Saranac-type dormancy, Table 2). Allegiance is also similar to Fortress. However, Allegiance is resistant to phytophthora root rot (Fortress = HR, Table 5), and Allegiance is highly resistant to anthracnose (Fortress = R, Table 4). Allegiance is also similar to WL 316. However, Allegiance has low resistance to the spotted alfalfa aphid (WL 316 = R, Table 3), and Allegiance is a Ranger-type fall dormant (WL 316 = Saranac-type dormancy, Table 2). Allegiance is also similar to Oneida VR. However, Allegiance is highly resistant to anthracnose (Oneida VR = MR, Table 4), and Allegiance is resistant to phytophthora root rot (Oneida VR = MR, Table 5).

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Table 1 > Bacterial Wilt Resistance -  
Highland, MD

<u>Entry</u>	<u>% Resistance</u>	<u>A.S.I.</u>
Allegiance (R)	60	1.38
DK 125 (HR)	71	0.83
Vernal (R)	53	1.57
Narragansett (S)	9	3.44
LSD .05		0.52
CV %		19

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Table 2 > Fall Dormancy Reaction\* -  
Warden, WA (1987)

<u>Entry</u>	<u>Fall Height (Inches)</u>
Vernal (2)**	5.2
Ranger (3)	6.9
Saranac (4)	7.8
Allegiance (3)	7.0
Fortress (4)	7.7
DK 125 (3)	8.2
WL 316 (4)	8.3
Echo (4)	8.9
LSD .05	1.3
CV %	12.8

\* Plots clipped 9/16/87, measured 10/15/87. Fall Height measured in inches from a replicated space-plant nursery.

\*\*CASC system.

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Table 3 > Spotted Alfalfa Aphid Resistance -  
Bakersfield, CA (1987)

<u>Entry</u>	<u>% Resistance</u>	<u>A.S.I.</u>
Allegiance (LR)	13	4.5
5432 (HR)	56	2.9
WL 316 (R)	48	3.3
DK 125 (S)	1	4.8
Oneida VR (S)	1	4.8
Kanza (R)	52	3.1
Ranger (S)	0	5.0
LSD .05		0.4
CV %		4.8

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Table 4 > Anthracnose Resistance -  
Highland, MD (1987)

<u>Entry</u>	<u>% Resistance</u>
Allegiance (HR)	67
Fortress (R)	30
Echo (MR)	21
Arrow (MR)	17
Oneida VR (MR)	16
5432 (S)	2
Saranac AR (R)	39
Saranac (S)	2
LSD .05	6
CV %	17



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Table 5    Phytophthora Root Rot Resistance -  
             Highland, MD (1987)

<u>Entry</u>	<u>% Resistance</u>
Allegiance (R)	34
Arrow (HR)	52
Fortress (HR)	45
DK 125 (R)	44
Oneida VR (MR)	24
5432 (MR)	9
Agate (R)	33
Saranac (S)	3
LSD .05	8
CV %	13

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U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
LIVESTOCK AND SEED DIVISION  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MARYLAND 20705OBJECTIVE DESCRIPTION OF VARIETY  
ALFALFA (*Medicago sativa* sensu Gunn et al.)

NAME OF APPLICANT(S) United Agriseeds, Inc.	TEMPORARY DESIGNATION 84-27	VARIETY NAME Allegiance
ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code) P. O. Box 4011 Champaign, IL 61820		FOR OFFICIAL USE ONLY PVPO NUMBER 8900064

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place numbers in the boxes to designate the expressions which are characteristic of the commercial generations of the application variety. Data for quantitative plant characters should be based on a minimum of 100 plants. Include leading zeros when necessary (e.g.,   ) for quantitative data. Comparative data should be determined from varieties entered in the same trial. Plant color may be precisely designated by using any recognized color chart, e.g., The Munsell Plant Tissue Color Charts.

## 1. WINTERHARDINESS:

 CLASS:

- |  |                                      |
|--|--------------------------------------|
| 1 = Very Non-Winterhardy (CUF 101)           | 2 = Non-Winterhardy (Moapa 69)       |
| 3 = Intermediately Non-Winterhardy (Mesilla) | 4 = Semi-Winterhardy (Lahontan)      |
| 5 = (Du Puits)                               | 6 = Moderately Winterhardy (Saranac) |
| 7 = (Ranger)                                 | 8 = Winterhardy (Vernal)             |
| 9 = Extremely Winterhardy (Norseman)         |                                      |

TEST LOCATION: Warden, WA

## 2. FALL DORMANCY:

## FALL DORMANCY (DETERMINED FROM SPACED PLANTINGS)

TESTING INSTITUTION AND LOCATION	DATE OF LAST CUT	DATE REGROWTH SCORED	REGROWTH SCORE OR AVERAGE HEIGHT				LSD .05
			APPLICATION VARIETY	CHECK VARIETIES*			
				Vernal	Ranger	Saranac	
W-L Research, Inc. Warden, WA	9/16/87	10/15/87	7.0	5.2	6.9	7.8	1.3

\* CUF 101, Moapa 69, Mesilla, Lahontan, Du Puits, Saranac, Ranger, Vernal, or Norseman as appropriate.

Specify scoring system used: Measured in inches in replicated space-planted nursery Fall Growth Habit (Determined from Fall Dormancy Trials)

- |                            |                          |                            |
|----------------------------|--------------------------|----------------------------|
| 1 = Erect (CUF 101)        | 3 = Semierect (Mesilla)  | 5 = Intermediate (Saranac) |
| 7 = Semidecumbent (Vernal) | 9 = Decumbent (Norseman) |                            |

## 3. RECOVERY AFTER FIRST SPRING CUT (In Southwest, first cut after March 21):

- |                          |                    |                           |                   |
|--------------------------|--------------------|---------------------------|-------------------|
| 1 = Very Fast (CUF 101)  | 3 = Fast (Saranac) | 5 = Intermediate (Ranger) | 7 = Slow (Vernal) |
| 9 = Very Slow (Norseman) |                    |                           |                   |

TEST LOCATION: Highland, MD

## 4. AREAS OF ADAPTATION IN U.S. (Where tested and proven adapted):

 Primary Area of Adaptation  Other Areas of Adaptation

- |  |                               |               |
|--|-------------------------------|---------------|
| 1 = North Central                        | 2 = East Central              | 3 = Southeast |
| 5 = Moderately Winterhardy Intermountain | 6 = Winterhardy Intermountain |               |
| 8 = Other (Specify) _____                |                               |               |

- |               |                  |
|---------------|------------------|
| 4 = Southwest | 7 = Great Plains |
|---------------|------------------|



## 5. FLOWERING DATE (When 10% of plants possess open flowers at time of first spring cut):

  Days Earlier Than Same As   Days Later Than 

- |             |             |             |            |              |
|-------------|-------------|-------------|------------|--------------|
| 1 = CUF 101 | 2 = Mesilla | 3 = Saranac | 4 = Vernal | 5 = Norseman |
|-------------|-------------|-------------|------------|--------------|

TEST LOCATION: Highland, MD

## 6. PLANT COLOR (Determined from healthy regrowth 3 weeks after first spring cut, controlling leafhoppers if necessary):

2

1 = Very Dark Green (524)

2 = Dark Green (Vernal)

3 = Light Green (Ranger)

COLOR CHART VALUE (Specify chart used; Munsell Color Charts, 1st Edition 1952, Munsell Co., Baltimore, MD):APPLICATION VARIETY: 5/6VERNAL: 5/6 (WL 315 = 4/4)TEST LOCATION: Highland, MD - Measurements taken June 5-6, 1986 (Insect Control = Furadan)

## 7. CROWN TYPE (Determined from spaced plantings):

2

Noncreeping Types:

1 = Broad (Vernal)

2 = Intermediate (Saranac)

3 = Narrow (CUF 101)

Creeping Types:

4 = Creeping Rooted (Rangelander)

5 = Rhizomatous (Rhizoma)

## 8. FLOWER COLOR (Determine frequency of plants for each color class as defined by USDA Agricultural Handbook No. 424 (Barnes 1972), allowing all plants in plot to flower):

005

% Purple and Violet (Subclasses 1.1 to 1.4)

% Blue (Subclasses 2.3 and 2.4)

094

% Variegated Other Than Blue (Subclasses 2.1, 2.2, 2.5 to 2.9)

% Yellow (Subclasses 4.1 to 4.4)

001

% Cream (Class 3)

% White (Class 5)

TEST LOCATION: Warden, WA

## 9. POD SHAPE (Determine frequency of plants with the following pod shapes produced on well cross-pollinated racemes):

100

% Tightly Coiled (One or more coils, center more or less closed)

% Loosely Coiled (One or more coils, center conspicuously open)

% Sickie (Less than 1 coil)

TEST LOCATION: Warden, WA

10. PEST RESISTANCE: Provide in the appropriate column, trial data for application variety, and resistant (R) and susceptible (S) check varieties, synthetic generation tested, average severity index scores (ASI), least significant difference statistics (LSD .05), the institution in charge of test, year, and location of test, and whether test is a field or laboratory evaluation. Describe scoring system, and any test procedure which differs from standard methods proposed by Elgin (1982). Trial data from other test years or locations should be presented whenever available on a separate document as Exhibit D. Seeds of the check varieties and germplasm lines listed below can be obtained from the USDA Field Crops Laboratory, Bldg. 001, Rm. 335, BARC-West, Beltsville, MD 20705. Although comparisons with check varieties listed below are preferred, comparisons with any appropriate check variety recommended by Elgin (1982) may be presented.

## A. DISEASE RESISTANCE:

A. DISEASE RESISTANCE:	DISEASE	VARIETY	SYN. GEN. TESTED	PERCENT RESISTANT PLANTS	NUMBER OF PLANTS TESTED	ASI	ASI LSD .05	INSTITUTION, YEAR, LOCATION, FIELD OR LABORATORY
Anthracnose, Race 1 ( <i>Colletotrichum trifolii</i> )  (HR)	Application		1	67	310	---	% Resis. LSD (.05) 6.0	W-L Research, Inc. 1987 Highland, MD
	<del>ARC</del> Saranac AR (R)		39	317	---			
	Saranac (S)		2	292	---			
	SCORING SYSTEM: % Resistance based on survivors in greenhouse seedling test							
Anthracnose, Race 2 ( <i>Collectotrichum trifolii</i> )	Application							
	Saranac AR (R)							
	Arc (S)							
	SCORING SYSTEM:							
Bacterial Wilt ( <i>Corynebacterium insidiosum</i> )  (R)	Application		1	60	161	1.38	0.52	W-L Research, Inc. 1987 Highland, MD
	Vernal (R)		53	173	1.57			
	Narragansett (S)		9	188	3.44			
	SCORING SYSTEM: Plants scored 0-5; 0 and 1 resistance and 5 = dead plant							
Common Leafspot ( <i>Pseudopeziza medicaginis</i> )	Application							
	MSA-CW3AN3 (R)							
	Ranger (S)							
	SCORING SYSTEM:							

10. A. PEST RESISTANCE (Continued):

DISEASE	VARIETY	SYN. GEN. TESTED	PERCENT RESISTANT PLANTS	NUMBER OF PLANTS TESTED	ASI	ASI LSD .05	INSTITUTION, YEAR, LOCATION, FIELD OR LABORATORY
Downy Mildew ( <i>Peronospora trifoliorum</i> )  Isolate, if known:  	Application						
	Saranac (R)						
	Kanza (S)						
	SCORING SYSTEM:						
Fusarium Wilt ( <i>Fusarium oxysporum</i> f. <i>medicaginis</i> )  (R)	Application	1	42	145	2.50	0.46	W-L Research, Inc. 1985 Highland, MD
	XXXXXXXX Agate (R)		57	162	1.90		
	XXXXXXXX MnGN-1 (S)		16	138	3.94		
	SCORING SYSTEM: Plants scored 0-5; 0 and 1 resistant and 5 = dead plant						
Phytophthora Root Rot ( <i>Phytophthora megasperma</i> f. <i>medicaginis</i> )  (R)	Application	1	34	235	---	% Resis.	W-L Research, Inc. 1987 Highland, MD
	Agate (R)		33	238	---	LSD(.05)	
	Saranac (S)		3	244	---	8.0	
	SCORING SYSTEM: % Resistance based on survivors in a greenhouse seedling test						
Verticillium Wilt ( <i>Verticillium albo-atrum</i> )  (R)	Application	1	27	299	3.3	0.2	Univ. of Wis/Madison 1987
	Vertus (R)		33	281	3.0		
	Saranac (S)		5	305	4.2		
	SCORING SYSTEM: Plants scored 1-5 in growth room test; 1 and 2 resistant and 5 = dead plant						
Other (Specify)   	Application						
	(R)						
	(S)						
	SCORING SYSTEM:						
Other (Specify)   	Application						
	(R)						
	(S)						
	SCORING SYSTEM:						

B. INSECT RESISTANCE:

INSECT	VARIETY	SYN. GEN. TESTED	PERCENT DEFOLIATION	DEFOLIATION IN PERCENT OF RESISTANT CHECK	ASI	ASI LSD .05	INSTITUTION, YEAR, LOCATION, FIELD OR LABORATORY
Alfalfa Weevil ( <i>Hypera postica</i> )	Application						
	Arc (R)			100			
	Saranac (S)						
	SCORING SYSTEM:						

## 10. B. INSECT RESISTANCE (Continued):

INSECT	VARIETY	SYN. GEN. TESTED	PERCENT SEEDLING SURVIVAL	NUMBER OF SEEDLINGS TESTED	ASI	ASI LSD .05	INSTITUTION, YEAR, LOCATION, FIELD OR LABORATORY
Blue Alfalfa Aphid ( <i>Acyrtosiphon kondoi</i> )  (S)	Application	1	5	220	3.7	0.4	W-L Research, Inc. 1987 Bakersfield, CA
	CUF 101 (R)		59	220	2.4		
	PA-1 (S)		14	220	3.8		
	SCORING SYSTEM: Plants scored 1-5; 1 and 2 resistant, 5 = dead plant						
Pea Aphid ( <i>Acyrtosiphon pisum</i> )  (R)	Application	1	57	207	2.4	0.5	W-L Research, Inc. 1984 Bakersfield, CA
	Kanza (R)		38	194	2.9		
	Ranger (S)		4	213	4.6		
	SCORING SYSTEM: Plants scored 1-5; 1 and 2 resistant, 5 = dead plant						
Spotted Alfalfa Aphid ( <i>Therioaphis maculata</i> )  Biotype, if known: (H)  (LR)	Application	1	13	155	4.5	0.4	W-L Research, Inc. 1987 Bakersfield, CA
	Kanza (R)		52	154	3.1		
	Ranger (S)		0	166	5.0		
SCORING SYSTEM: Plants scored 1-5; 1 and 2 resistant, 5 = dead plant							

INSECT	VARIETY	SYN. GEN. TESTED	PERCENT RESISTANT PLANTS	NUMBER OF PLANTS TESTED	ASI	ASI LSD .05	INSTITUTION, YEAR, LOCATION, FIELD OR LABORATORY
Potato Leafhopper Yellowing ( <i>Empoasca fabae</i> )	Application						
	MSA-CW3An3 (R)						
	Ranger (S)						
	SCORING SYSTEM:						
Other (Specify)	Application						
	(R)						
	(S)						
	SCORING SYSTEM:						

C. NEMATODE RESISTANCE:	VARIETY	SYN. GEN. TESTED	PERCENT RESISTANT PLANTS	NUMBER OF PLANTS TESTED	ASI	ASI LSD .05	INSTITUTION, YEAR, LOCATION, FIELD OR LABORATORY
Northern Root Knot ( <i>Meloidogyne hapla</i> )  (MR)	Application	1	24	245	2.5	0.5	W-L Research, Inc. 1987 Warden, WA
	Nev. Syn.'XX (R)		87	215	1.2		
	Lahontan (S)		6	208	2.9		
	SCORING SYSTEM: Plants scored 1-4; 1 = resistant (no galls), 4 - severely galled						

## 10. C. NEMATODE RESISTANCE (Continued):

NEMATODE	VARIETY	SYN. GEN. TESTED	PERCENT RESISTANT PLANTS	NUMBER OF PLANTS TESTED	ASI	ASI LSD .05	INSTITUTION, YEAR, LOCATION, FIELD OR LABORATORY
Southern Root Knot ( <i>Meloidogyne incognita</i> )	Application						
	Moapa 69 (R)						
	Lahontan (S)						
	SCORING SYSTEM:						
Stem Nematode ( <i>Ditylenchus dipsaci</i> )  (R)	Application	1	38	204	3.1	0.4	W-L Research, Inc. 1987 Warden, WA
	Lahontan (R)		42	191	2.9		
	Ranger (S)		19	197	3.6		
	SCORING SYSTEM: Plants scored 1-5; 1 and 2 resistant, 5 = dead plant						
Other (Specify)	Application						
	(R)						
	(S)						
	SCORING SYSTEM:						

## 11. INDICATE THE VARIETY THAT MOST CLOSELY RESEMBLES THE APPLICATION VARIETY FOR EACH OF THE FOLLOWING CHARACTERS:

CHARACTER	VARIETY	CHARACTER	VARIETY
Winterhardiness	Arrow	Plant Color	Fortress
Recovery After 1st Cut	WL 316	Crown Type	Oneida VR
Area of Adaptation	5432	Combined Disease Resistance	Fortress
Flowering Date	Oneida VR	Combined Insect Resistance	DK 125

## REFERENCES

- Barnes, D.K. 1972. A System for Visually Classifying Alfalfa Flower Color. U.S. Dep. Agric. Handb. 424. 18 pp. (Note: Greenish cast of plate 6, A and B is an artifact of printing, actual colors a blend of yellow and white.)
- Elgin, J.H., Jr., (ed.). 1982. Standard Tests to Characterize Pest Resistance in Alfalfa Cultivars. U.S. Dep. Agric. Tech. Bull. (In Press).
- Gunn, C.R., W.H. Skrdla, and H.C. Spencer. 1978. Classification of *Medicago sativa* L. using legume characters and flower colors. U.S. Dep. Agric. Tech. Bull. 1574. 84 pp.
- Munsell Color Co. 1977. Munsell Plant Tissue Color Charts. Munsell Color Co., Inc. Baltimore.

NOTE: Any additional descriptive information and supporting documentation may be provided as Exhibit D.

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Exhibit D

Additional Description of Variety

Allegiance is a fall-dormant variety adapted to the northern half of the United States. Mid-summer growth is erect and fall growth is semi-erect. The estimated germplasm source contributions are M. falcata - 6%, Ladak - 5%, M. varia - 19%, Turkistan - 2%, Flemish - 66%, and Chilean - 2%.

To maintain varietal integrity, foundation seed of Allegiance must be produced above 40° N. latitude or in areas where equivalent temperature extremes result from increased elevation. No limitation is placed on areas for certified seed production.

Exhibit EStatement of Applicant's Ownership

Allegiance is a proprietary alfalfa variety developed by the plant breeding staff of W-L Research, Inc., 2000 Oak Street, Bakersfield, California 93301. Plant Variety Protection and marketing rights for Allegiance have been transferred from W-L Research, Inc. to United Agriseeds, P. O. Box 4011, Champaign, Illinois 61820.

Applications for plant variety protection on Allegiance have not been filed in any other country.